Title: SYNCHRONIZING LOGICAL VIEWS INDEPENDENT OF PHYSICAL STORAGE REPRESENTATIONS
Inventors: Yunxin Wu, Shaoyu Zhou, Lev Novik, Irene Hudis and Ashish B. Shah
Docket No.: 13768.426

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Fig. 1

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Fig. 2A

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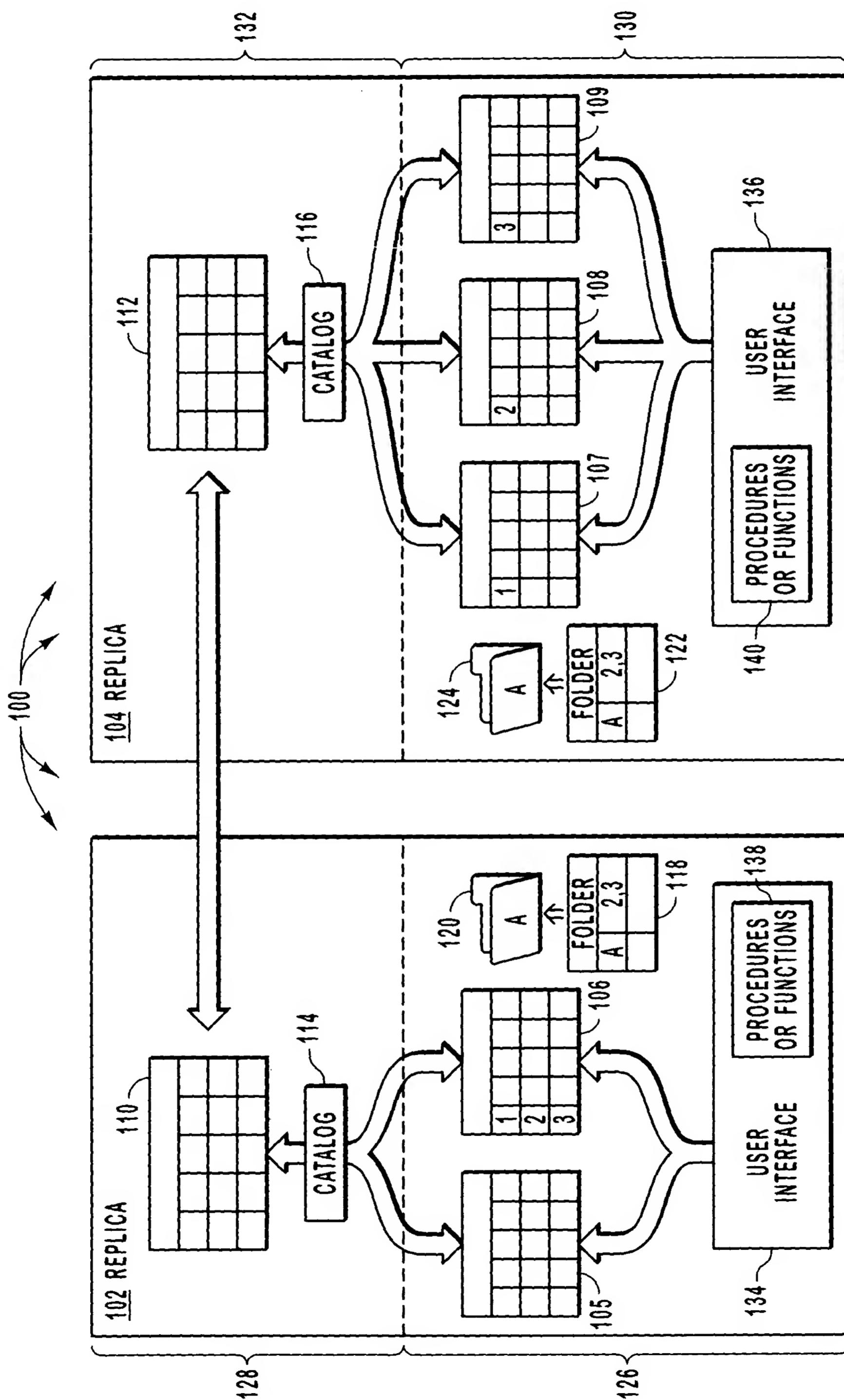
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Fig. 2B

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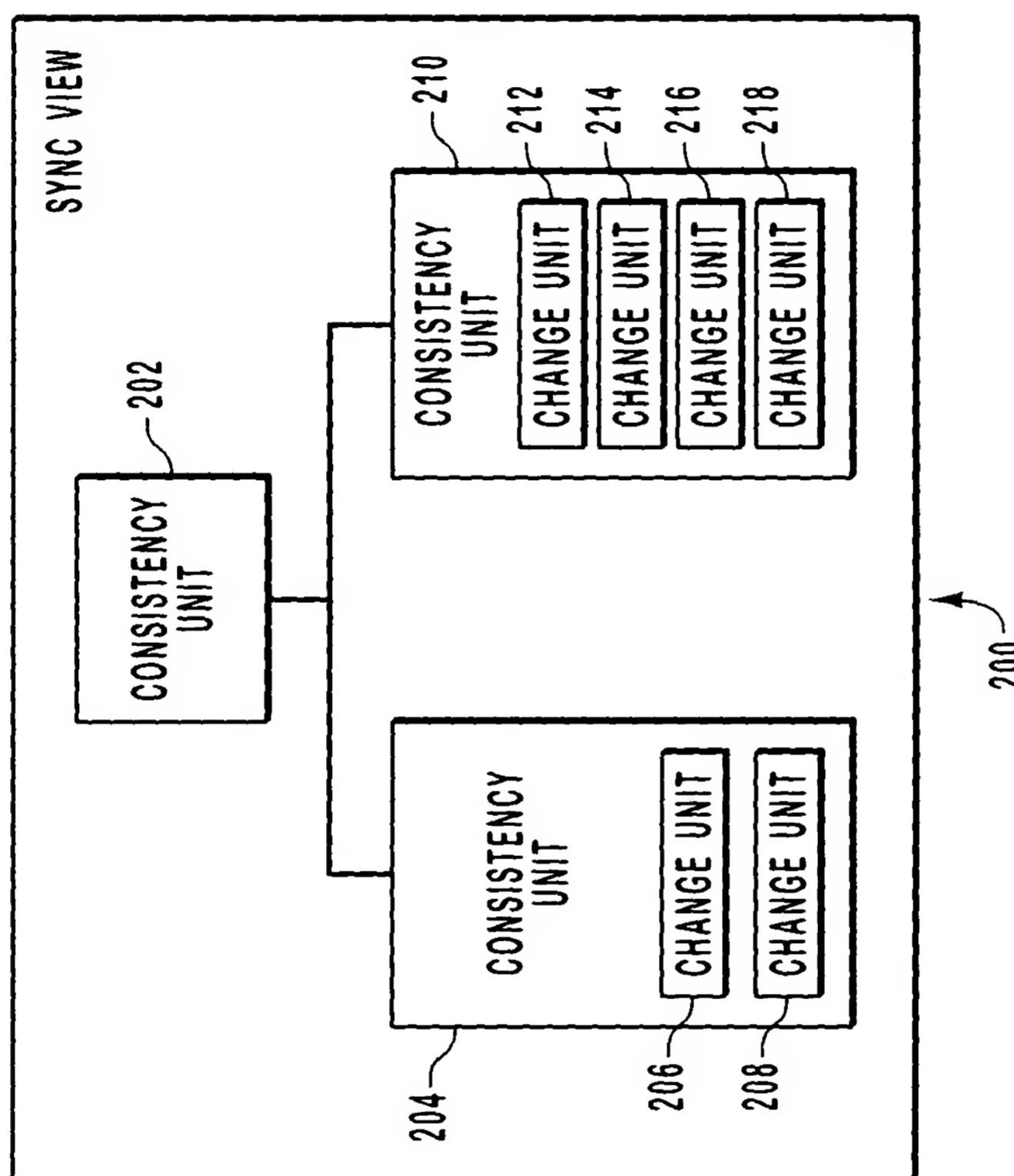Docket No.: 13768.426

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Fig. 3A

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Fig. 3B

LOGICAL PHYSICAL TABLE 304

LOGICAL VIEW/SYNCH TABLE 310

TIME (1)

ITEM	LOCAL_CN
I1	4
I2	12
I3	9
I4	11

ITEM	LOCAL_CN	VERSION
I1	4	A4
I2	12	A12
I3	9	C100
I4	11	D99

TIME (2)

ITEM	LOCAL_CN
I1	4
I2	12
I3	9
I4	11

ITEM	LOCAL_CN	VERSION
I1	4	A4
I2	12	A12
I3	9	C101
I4	11	D99

TIME (3)

ITEM	LOCAL_CN
I1	4
I2	12
I3	13
I4	11

ITEM	LOCAL_CN	VERSION
I1	4	A4
I2	12	A12
I3	9	C101
I4	11	D99

TIME (4)

ITEM	LOCAL_CN
I1	4
I2	12
I3	13
I4	11

ITEM	LOCAL_CN	VERSION
I1	4	A4
I2	13	A12
I3		C101
I4	11	D99

TIME

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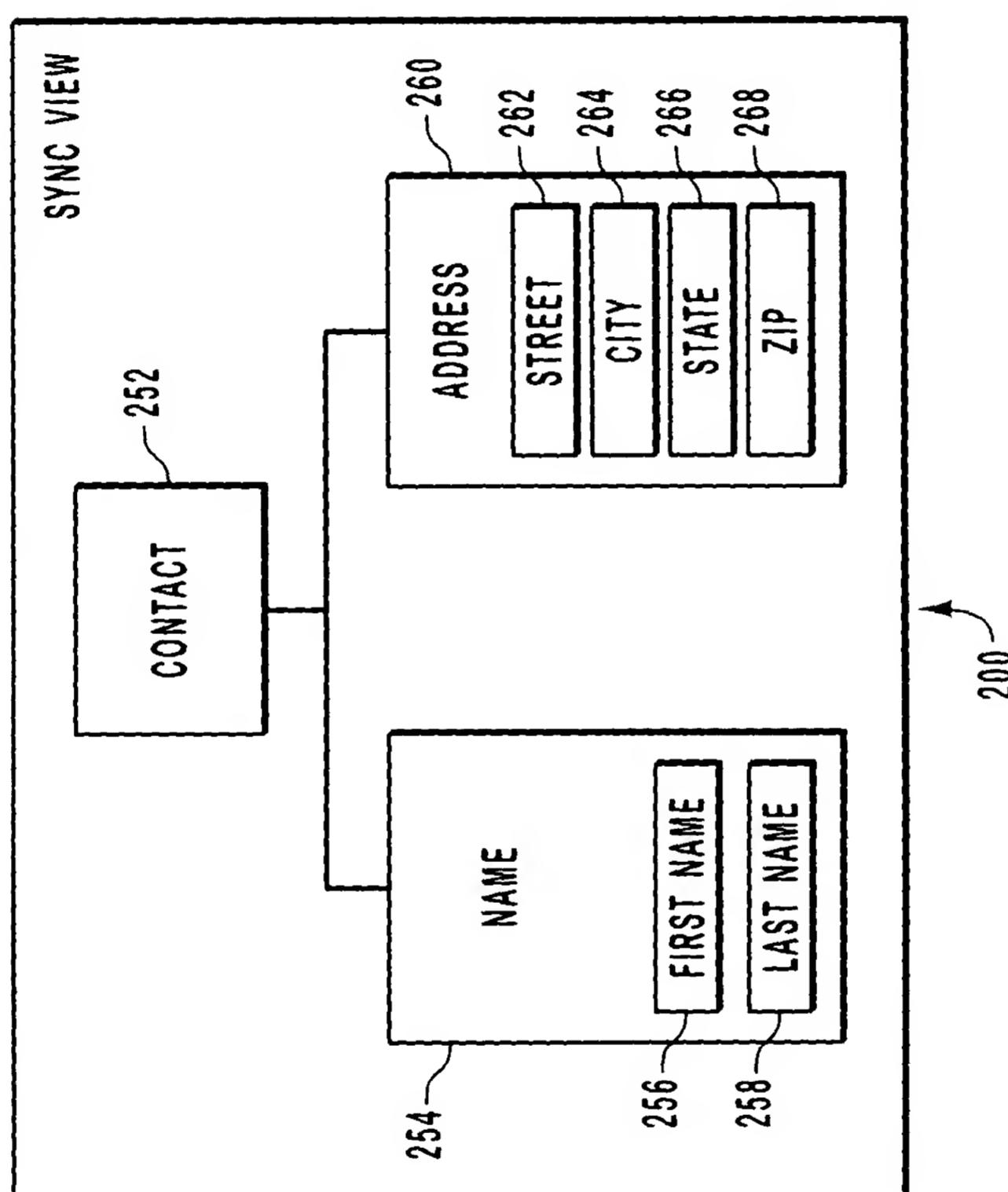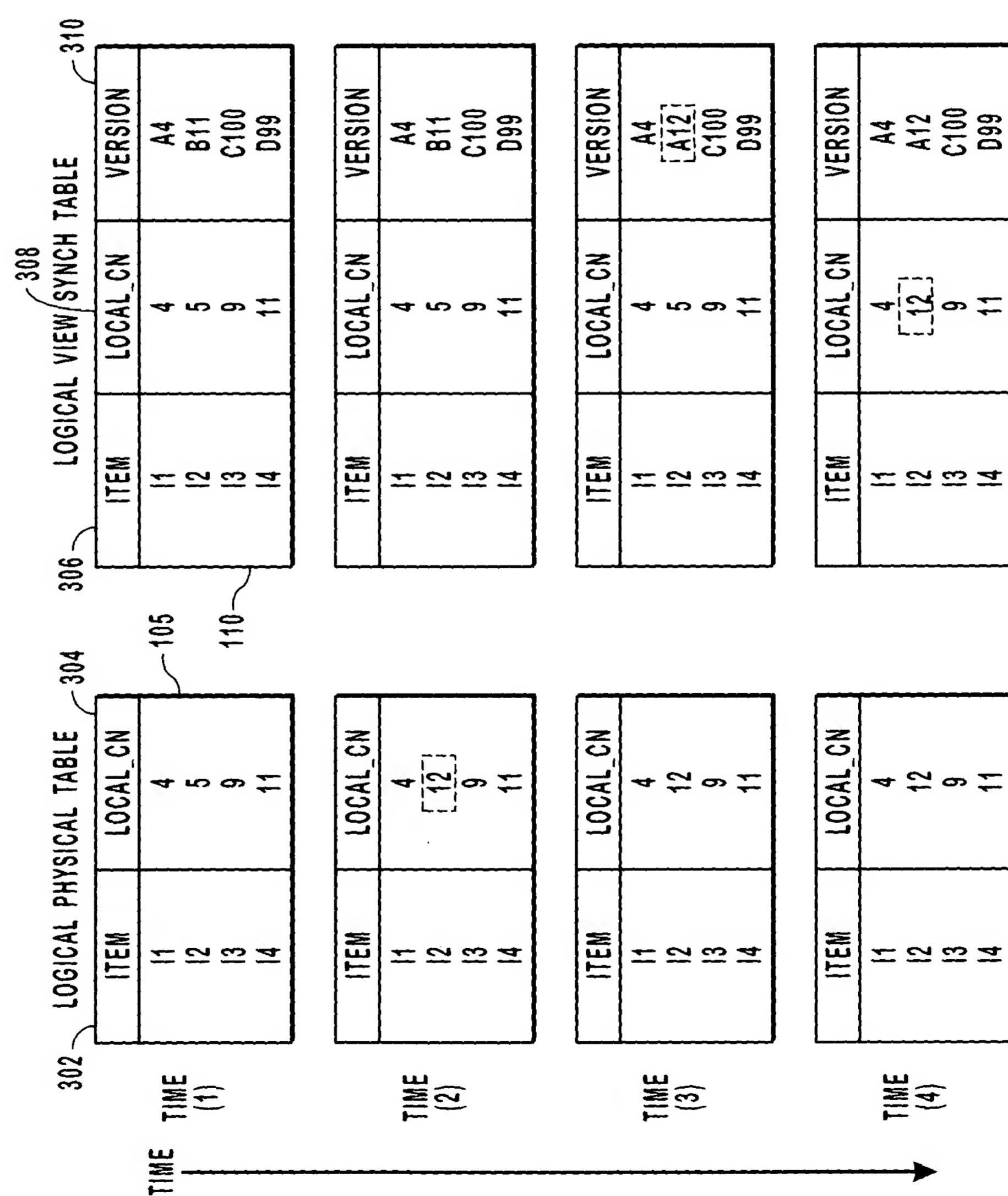Docket No.: 13768.426

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ITEM	VERSION
I1	A4
I2	A12
I3	C100
I4	D99

ITEM	CUSTOM CHANGE ENUMERATOR
I1	AA
I2	BB
I3	CC
I4	DD

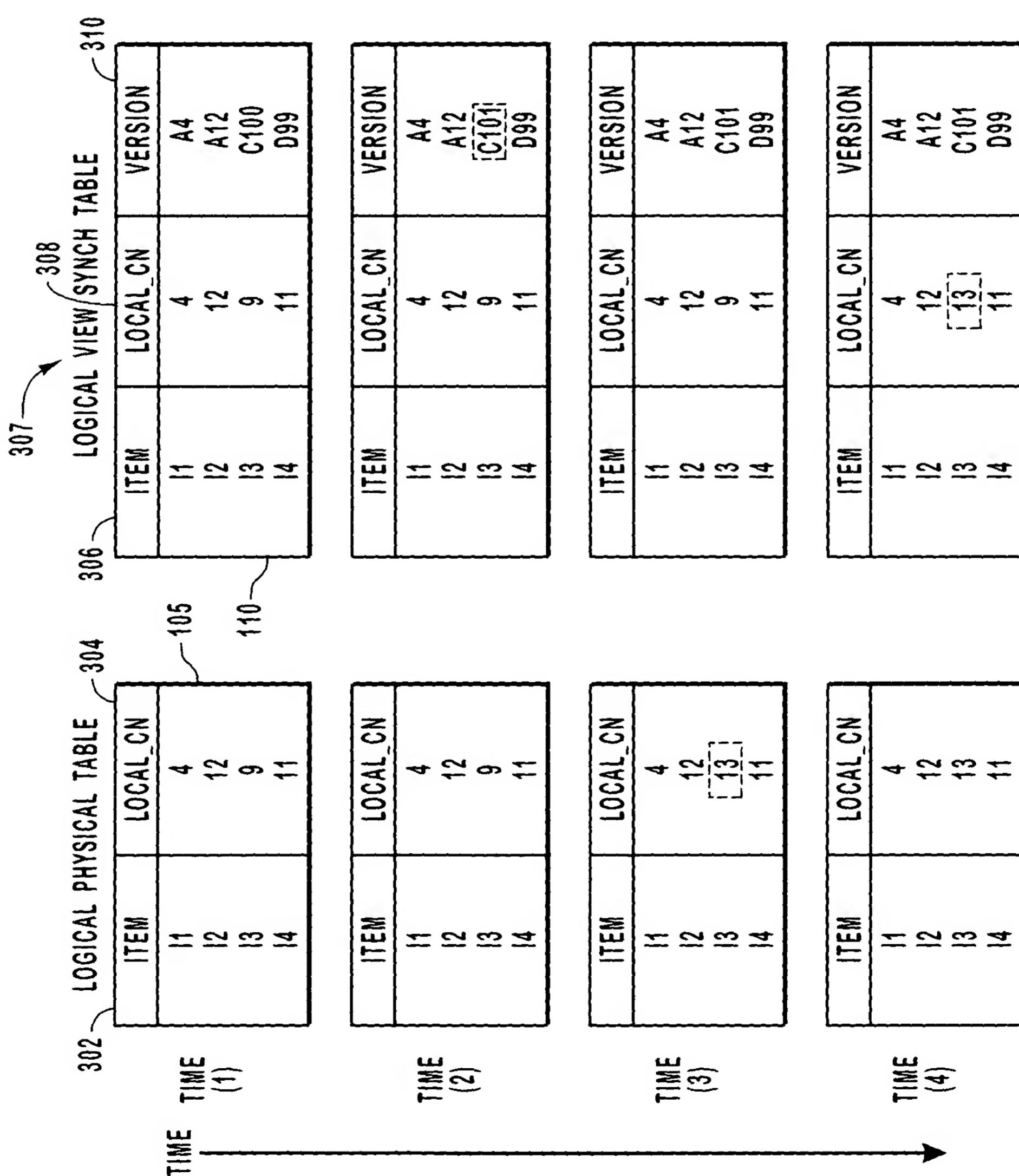| VERSION	CUSTOM CHANGE ENUMERATOR
A4	AA
A12	BB
C100	CC
D99	DD

301
302
310
402
410
404

Fig. 4

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Fig. 5

500

502
STEP FOR IDENTIFYING ITEMS FROM A PHYSICAL LAYOUT THAT ARE TO BE MAPPED TO A LOGICAL VIEW

504
AN ACT OF RECEIVING A SYNCHRONIZATION INDICATION THAT THE SOURCE REPLICA IS TO BE SYNCHRONIZED WITH THE DESTINATION REPLICA FROM AMONG THE PLURALITY OF REPLICAS

506
AN ACT OF DETERMINING IF ITEMS IN THE PHYSICAL LAYOUT AT THE SOURCE REPLICA HAVE CHANGED

508
AN ACT OF MAPPING ANY CHANGED ITEMS IN THE PHYSICAL LAYOUT AT THE SOURCE REPLICA TO A LOGICAL VIEW, THE LOGICAL VIEW BEING SUBSTANTIALLY SIMILAR TO LOGICAL VIEWS AT ONE MORE OTHER REPLICAS IN THE TOPOLOGY, SO AS TO INCREASE THE EFFICIENCY OF SYNCHRONIZING THE SOURCE REPLICA WITH THE ONE MORE OF REPLICAS

510
AN ACT OF SENDING AT LEAST ONE A MAPPED ITEM FROM THE SOURCE REPLICA TO THE DESTINATION REPLICA

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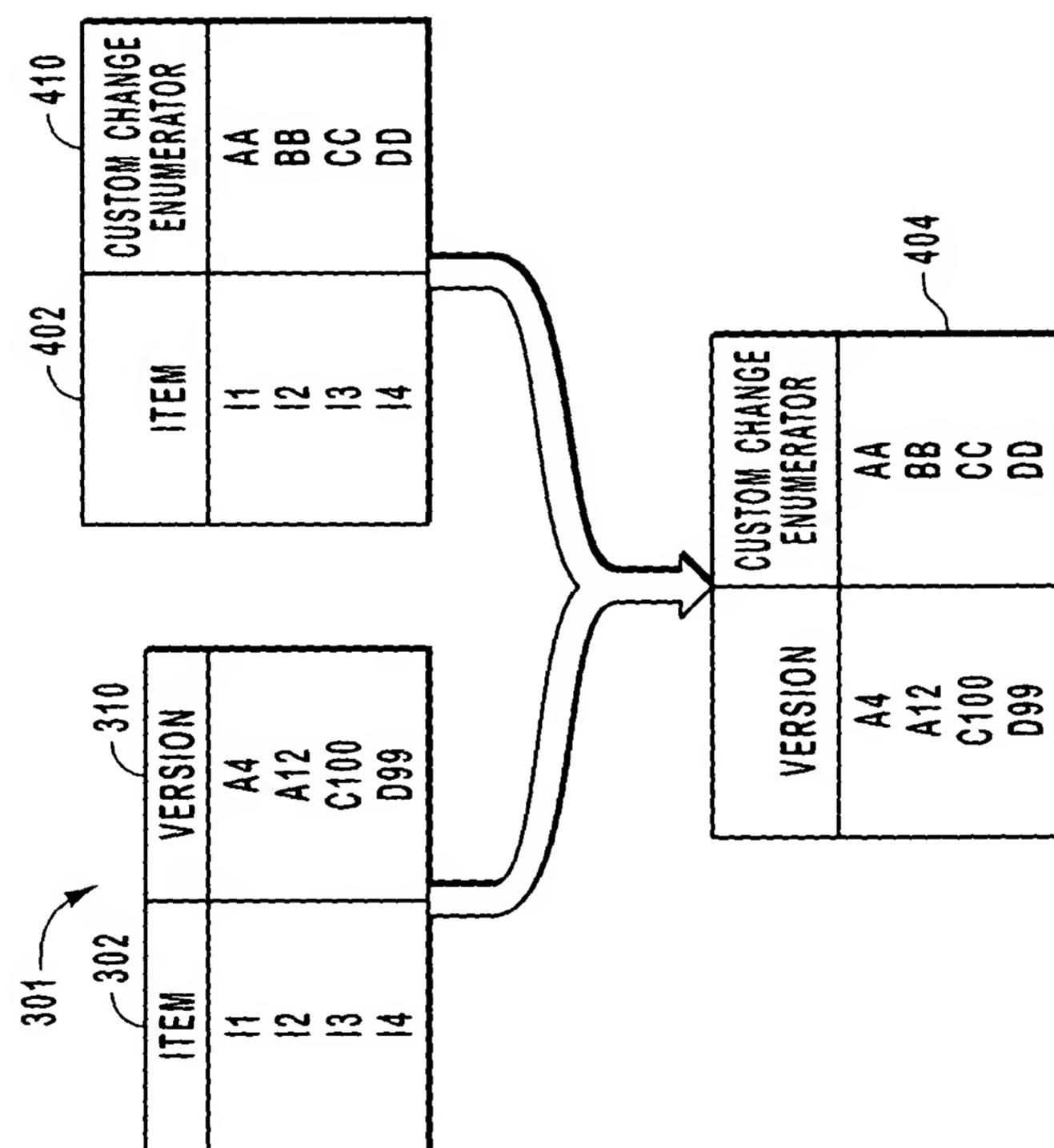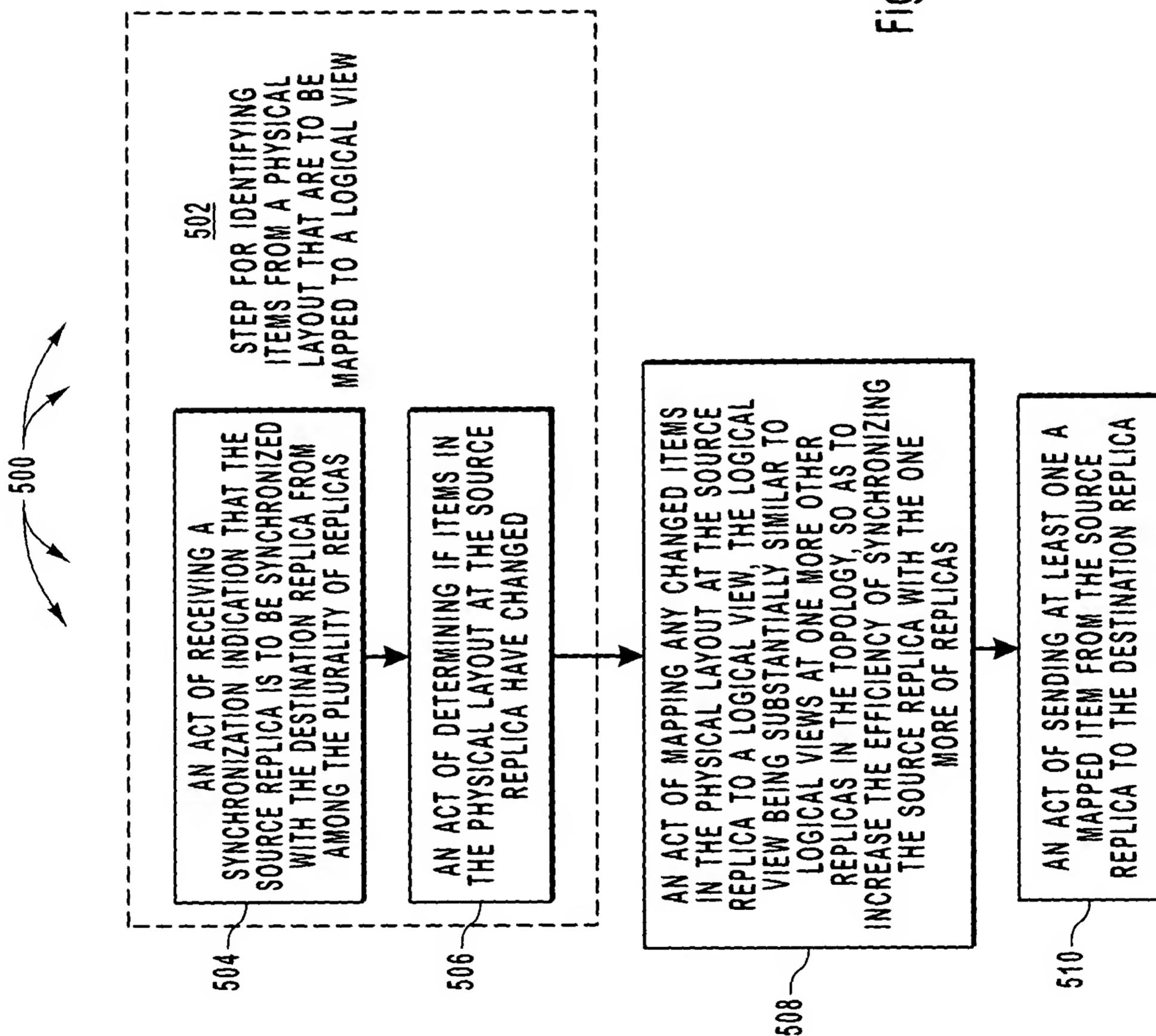Docket No.: 13768.426

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600

602

AN ACT OF ACCESSING CORE CODE THAT CAN BE USED TO FACILITATE COMPLICATION OF LOGICAL SCHEMAS

604

AN ACT OF ACCESSING A LOGICAL SCHEMA, THE LOGICAL SCHEMA INCLUDING: A CHANGE UNIT THAT DEFINES THE GRANULARITY OF AN ITEM; AND A CONSISTENCY UNIT, DEFINING THAT ONE OR MORE ITEMS OF THE DEFINED GRANULARITY MUST BE RECEIVED IN ORDER FOR ANY OF THE ONE MORE ITEMS TO BE UPDATED IN A REPLICA

606

AN ACT OF UTILIZING THE CORE CODE TO COMPILE THE LOGICAL SCHEMA INTO AT LEAST A CATALOG, THE CATALOG MAPPING ITEMS FROM A PHYSICAL LAYOUT TO A LOGICAL VIEW, THE LOGICAL VIEW BEING SUBSTANTIALLY SIMILAR TO A LOGICAL VIEW AT ONE OR MORE OTHER COMPUTER SYSTEMS.

Fig. 6

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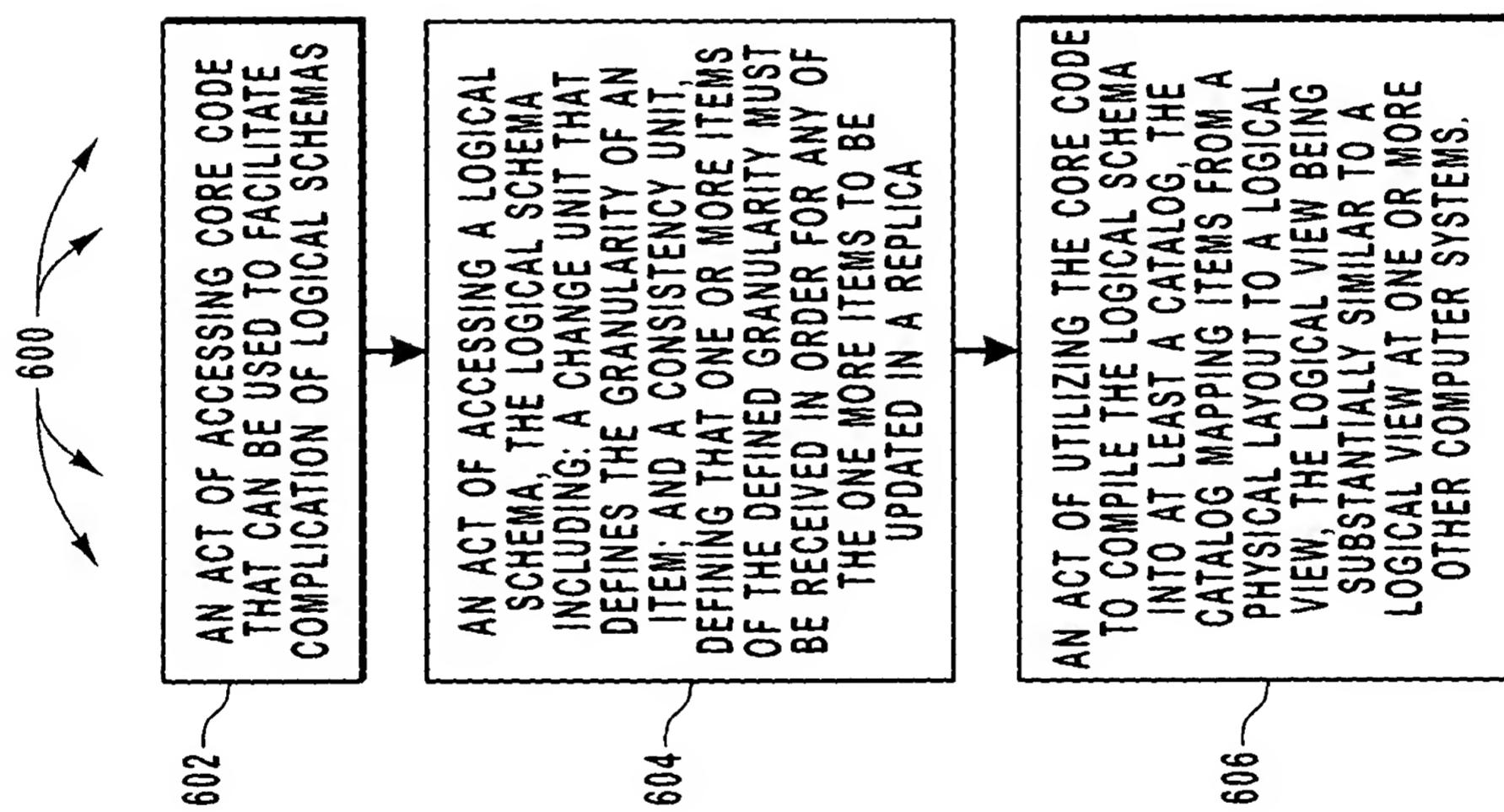Docket No.: 13768.426

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Fig. 7